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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/003,718	10/26/2001	David Ternes	279.405US1	2631

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EXAMINER

OROPEZA, FRANCES P

ART UNIT PAPER NUMBER

3762

DATE MAILED: 09/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/003,718

Applicant(s)

TERNES ET AL.

Examiner

Frances P. Oropeza

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 4/15/04 (Election).
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 15-33 and 35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15-18, 20, 21, 25-28, 30, 31 and 35 is/are rejected.
- 7) ☒ Claim(s) 19, 22-24, 29, 32 and 33 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/1/02 &amp; 4/15/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 15, 17, 18, 20, 21, 25-28, 30, 31 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lu et al. (US 5458623) in view of Sun et al. (US 5755739).

Lu et al. disclose a capture threshold determination system comprising a pacemaker (22), external programmer (10) and cable with surface electrode (18) (abstract; col. 1 @ 9-14; col. 3 @ 1-20 and 26-29; col. 23 @ 46 – col. 4 @ 29;

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col. 4 @ 45 – col. 5 @ 6; col. 5 @ 14-18). Lu et al. disclose the claimed invention except for two pacing channels (claims 15 and 26) and the comparison using time-domain correlation.

As to two pacing channels, Sun et al. teach waveform discrimination using two pacing channels for the purpose of effectively directing stimulation signals to the cardiac tissue. It would have been obvious to one having ordinary skill in the art at the time of the invention to have used two pacing channels in the Lu et al. system in order to provide stimulation flexibility enabling enhanced detection of auto-capture (abstract; figure 1; col. 1 @ 27-57; col. 8 @ 10-52)

As to time-domain correlation, Sun et al. teaches signal analysis using time-domain correlation for the purpose of enhancing the classification of rhythms. It would have been obvious to one having ordinary skill in the art at the time of the invention to have used time-domain correlations in the Sun et al. system in order to effectively evaluate the signal morphology so the point of loss of capture is clearly defined (col. 5 @ 6-19).

3. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lu et al. (US 5458623) in view of Sun et al. (US 5755739) and further in view of Callaghan et al. (US 4895152). As discussed in paragraph 2 of this action, modified Lu et al. disclose the claimed invention except for an evoked response sensing channel.

Callaghan et al. teach cardiac pacing using an evoked response sensing channel (54) for the purpose of enabling evaluation of the cardiac stimulation. It would have been obvious to one having ordinary skill in the art at the time of the invention to have used an

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evoked response sensing channel in the modified Lu et al. system in order to have a proven means that clearly determines the effectiveness of the cardiac stimulation (figure 5; col. 5 @ 3-20).

***Allowable Subject Matter***

4. Claims 19, 22-24, 29, 32 and 33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frances P. Oropeza whose telephone number is (703) 605-4355. The examiner can normally be reached Monday through Friday from 9 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela D. Sykes, can be reached on (703) 308-5181. The telephone number for facsimiles for regular communication and After Final communications is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application should be directed to the receptionist whose telephone number is (703) 308-0858.

Frances P. Oropeza  
Patent Examiner  
Art Unit 3762

JFO  
9/24/04

Angela D. Sykes

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